

<110> Ghayur, Tarig et al.

<130> BBI-149

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<150> 60/181,608

<151> 2000-02-10

<160> 71

<170> PatentIn Ver. 2.1

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Pro Leu Phe Glu Asp Met Thr Asp Ser Asp Cys Arg Asp Asn Ala
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Cys Pro Leu Phe Glu Asp Met Thr Asp Ser Asp Cys Arg Asp Asn Ala
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Pro Leu Phe Glu Asp Met Thr Asp Ser Asp Cys Arg
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Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
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Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
20 25 30

Met Thr Asp Ser Asp Cys Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
35 40 45

Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
50 55 60

Ser Val Lys Cys Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile
65 70 75 80

Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys
85 90 95

Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys
100 105 110

Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu
115 120 125

Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu
130 135 140

Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
145 150 155

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<211> 153

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Ala Pro Val Arg Ser Leu Asn Cys Thr Leu Arg Asp Ser Gln Gln Lys
1 5 10 15

Ser Leu Val Met Ser Gly Pro Tyr Glu Leu Lys Ala Leu His Leu Gln
20 25 30

Gly Gln Asp Met Glu Gln Gln Val Val Phe Ser Met Ser Phe Val Gln
35 40 45

Gly Glu Glu Ser Asn Asp Lys Ile Pro Val Ala Leu Gly Leu Lys Glu
50 55 60

Lys Asn Leu Tyr Leu Ser Cys Val Leu Lys Asp Asp Lys Pro Thr Leu
65 70 75 80

Gln Leu Glu Ser Val Asp Pro Lys Asn Tyr Pro Lys Lys Lys Met Glu
85 90 95

Lys Arg Phe Val Phe Asn Lys Ile Glu Ile Asn Asn Lys Leu Glu Phe
100 105 110

Glu Ser Ala Gln Phe Pro Asn Trp Tyr Ile Ser Thr Ser Gln Ala Glu
115 120 125

Asn Met Pro Val Phe Leu Gly Gly Thr Lys Gly Gly Gln Asp Ile Thr
130 135 140

Asp Phe Thr Met Gln Phe Val Ser Ser
145 150

T05029"55029"60

[illegible]

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Cys Thr Ser Arg Pro His Ile Thr Val Val Glu Gly Glu Pro Phe Tyr
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Leu Lys His Cys Ser Cys Ser Leu Ala His Glu Ile Glu Thr Thr Thr
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Lys Ser Trp Tyr Lys Ser Ser Gly Ser Gln Glu His Val Glu Leu Asn
      35             40             45

Pro Arg Ser Ser Ser Arg Ile Ala Leu His Asp Cys Val Leu Glu Phe
      50             55             60

Trp Pro Val Glu Leu Asn Asp Thr Gly Ser Tyr Phe Phe Gln Met Lys
  65             70             75             80

Asn Tyr Thr Gln Lys Trp Lys Leu Asn Val Ile Arg Arg Asn Lys His

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Cys Lys Glu Arg Glu Glu Lys Ile Ile Leu Val Ser Ser Ala Asn Glu
1 5 10 15
Ile Asp Val Arg Pro Cys Pro Leu Asn Pro Asn Glu His Lys Gly Thr
20 25 30
Ile Thr Trp Tyr Lys Asp Asp Ser Lys Thr Pro Val Ser Thr Glu Gln
35 40 45
Ala Ser Arg Ile His Gln His Lys Glu Lys Leu Trp Phe Val Pro Ala
50 55 60
Lys Val Glu Asp Ser Gly His Tyr Tyr Cys Val Val Arg Asn Ser Ser

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Thr Gly Tyr Tyr Ile His
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Gln

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Lys	Glu	Gly	Ala
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Gly	Lys	Asn	Asn	Arg	Pro	Ser
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<211> 11

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Gly	Ser	Arg	Asp	Ser	Ser	Gly	Ile	His	Val	Val
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Ser Ser Glu Leu Thr Gln Asp Pro Ala Val Ser Val Ala Leu Gly Gln
1 5 10 15

Thr Val Arg Ile Thr Cys Gln Gly Asp Ser Leu Arg His Phe Tyr Pro
20 25 30

Asn Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val Ile Tyr
35 40 45

Gly Lys Asn Asn Arg Pro Ser Gly Ile Pro Asp Arg Phe Ser Gly Ser
50 55 60

Gly Ser Gly Asn Thr Gly Ser Leu Thr Ile Thr Gly Ala Gln Ala Glu
65 70 75 80

Asp Glu Ala Asp Tyr Tyr Cys Gly Ser Arg Asp Ser Ser Gly Ile His
85 90 95

Val Val Phe Gly Gly Gly Thr Lys Val Thr Val Leu Gly
100 105

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<400> 20

Ser Tyr Ala Met
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<210> 21

<211> 17

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<400> 21

Ala Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 22

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<400> 22

Asp Asp Asp Asp Tyr Asp Phe Asp Tyr
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<210> 23

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Ser Gly Ser Ser Ser Asn Ile Gly Ile Asn Ala Val Asn
1 5 10

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<400> 24
Gly Asn Asp Gln Arg Pro
1 5

<210> 25
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<400> 25
Ala Ala Trp Asp Asp Ser Leu Ser Gly Pro Val
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<210> 26
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<400> 26
Ala Ile Ser Gly Ser Gln Gly Ser Thr Tyr Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 27
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<400> 27
Ala Ile Ser Gly Ser Gly Gly Ser Thr Trp Tyr Ala Asp Ser Val Lys
1 5 10 15

Gly

<210> 28
<211> 108
<212> PRT
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<400> 28
Leu Val Gln Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly
1 5 10 15

Phe Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly

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	20		25		30
Lys Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr	35	40	45		
Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn	50	55	60		
Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp	65	70	75	80	
Thr Ala Val Tyr Tyr Cys Ala Arg Asp Asp Asp Asp Tyr Asp Phe Asp	85	90	95		
Tyr Trp Gly Arg Gly Thr Met Val Thr Val Ser Ser	100	105			

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Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln
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Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ile Asn
20 25 30
Ala Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu
35 40 45
Ile Tyr Gly Asn Asp Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser
50 55 60
Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln
65 70 75 80
Ser Glu Asp Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu
85 90 95
Ser Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
100 105 110

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Phe Thr Phe Ser Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly
20 25 30
Lys Gly Leu Glu Trp Val Ser Ala Ile Ser Gly Ser Gly Gly Ser Thr
35 40 45

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Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn
50 55 60

Ser Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
65 70 75 80

Thr Ala Val Tyr Tyr Cys Ala Arg Asp Asp Asp Asp Tyr Asp Phe Asp
85 90 95

Tyr Trp Gly Arg Gly Thr Met Val Thr Val Ser Ser Gly Gly Gly Gly
100 105 110

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Ala Gln Ser Val Leu
115 120 125

Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg Val Thr Ile
130 135 140

Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ile Asn Ala Val Asn Trp
145 150 155 160

Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr Gly Asn
165 170 175

Asp Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser
180 185 190

Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln Ser Glu Asp Glu
195 200 205

Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu Ser Gly Pro Val
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Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly
225 230 235

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Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn
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<210> 32
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<400> 32
Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn Asp Gln Val
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<210> 33
<211> 14
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Asn Ala Pro Arg Thr Ile Phe Ile Ile Ser Met Tyr Lys Asp
1 5 10

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Ile Phe Ile Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly
1 5 10

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Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
1 5 10

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Gln Pro Arg Gly Met Ala Val Thr Ile Ser Val Lys Cys Glu
1 5 10

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Ala Val Thr Ile Ser Val Lys Cys Glu Lys Ile Ser Thr Leu
1 5 10

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Val Lys Cys Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys
1 5 10

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<400> 45

Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile Ile Ser Phe Lys
1 5 10

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<400> 46
Cys Glu Asn Lys Ile Ile Ser Phe Lys Glu Met Asn Pro Pro
1 5 10

<210> 47
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<400> 47
Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp
1 5 10

<210> 48
<211> 14
<212> PRT
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<400> 48
Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys Ser Asp Ile
1 5 10

<210> 49
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<400> 49
Asn Ile Lys Asp Thr Lys Ser Asp Ile Ile Phe Phe Gln Arg
1 5 10

<210> 50
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<400> 50
Lys Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His
1 5 10

<210> 51
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<400> 51
Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys Met Gln
1 5 10

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<210> 52
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<400> 52
Val Pro Gly His Asp Asn Lys Met Gln Phe Glu Ser Ser Ser
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<210> 53
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<400> 54
Asn Lys Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe
1 5 10

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Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu Lys
1 5 10

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Glu Gly Tyr Phe Leu Ala Cys Glu Lys Glu Arg Asp Leu Phe
1 5 10

<210> 56
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<400> 56
Ala Cys Glu Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys
1 5 10

<210> 57
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<400> 57
Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu
1 5 10

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Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu
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Ser	Ser	Glu	Leu	Thr	Gln	Asp	Pro	Ala	Val	Ser	Val	Ala	Leu	Gly	Gln		
1				5					10					15			
aca gtc agg atc aca tgc caa gga gac agc ctc aga cac ttt tat cca																	96
Thr	Val	Arg	Ile	Thr	Cys	Gln	Gly	Asp	Ser	Leu	Arg	His	Phe	Tyr	Pro		
			20					25					30				
aac tgg tac cag cag aag cca gga cag gcc cct gta ctt gtc atc tat																	144
Asn	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Val	Leu	Val	Ile	Tyr		
		35					40					45					
ggg aaa aac aat cgg ccc tca ggg atc cca gac cga ttc tct ggc tcc																	192
Gly	Lys	Asn	Asn	Arg	Pro	Ser	Gly	Ile	Pro	Asp	Arg	Phe	Ser	Gly	Ser		
	50					55					60						
ggc tca gga aac aca ggt tcc ttg acc atc act ggg gcc cag gcg gaa																	240
Gly	Ser	Gly	Asn	Thr	Gly	Ser	Leu	Thr	Ile	Thr	Gly	Ala	Gln	Ala	Glu		
65					70					75					80		
gat gag gct gac tat tac tgt ggc tcc cgg gac agc agt ggt atc cat																	288
Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Gly	Ser	Arg	Asp	Ser	Ser	Gly	Ile	His		
				85					90					95			
gtg gta ttc ggc gga ggg acc aag gtc acc gtc cta ggt																	327
Val	Val	Phe	Gly	Gly	Gly	Thr	Lys	Val	Thr	Val	Leu	Gly					
			100					105									

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<210> 65
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<400> 65

Val Val Phe Gly Gly Gly Thr Lys Val Thr Val Leu Gly
100 105

<213> Homo sapiens

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Ala Arg Asp Asp Asp Tyr Asp Phe Asp Tyr Trp Gly Arg Gly Thr

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cag	tct	gtg	ttg	acg	cag	ccg	ccc	tca	gcg	tct	ggg	gcc	ccc	ggt	cag	48
Gln	Ser	Val	Leu	Thr	Gln	Pro	Pro	Ser	Ala	Ser	Gly	Ala	Pro	Gly	Gln	
1				5					10					15		
agg	gtc	acc	atc	tct	tgt	tct	gga	agc	agc	tcc	aac	atc	gga	att	aat	96
Arg	Val	Thr	Ile	Ser	Cys	Ser	Gly	Ser	Ser	Ser	Asn	Ile	Gly	Ile	Asn	
			20					25					30			
gct	gta	aac	tg	tac	cag	cag	ctc	cca	gga	acg	gcc	ccc	aaa	ctc	ctc	144
Ala	Val	Asn	Trp	Tyr	Gln	Gln	Leu	Pro	Gly	Thr	Ala	Pro	Lys	Leu	Leu	
		35					40					45				
atc	tat	ggt	aat	gat	cag	cgg	ccc	tca	ggg	gtc	cct	gac	cga	ttc	tct	192
Ile	Tyr	Gly	Asn	Asp	Gln	Arg	Pro	Ser	Gly	Val	Pro	Asp	Arg	Phe	Ser	

50	55	60	
ggc tcc aag tct ggc acc tca gcc tcc ctg gcc atc agt ggg ctc cag			240
Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln			
65	70	75	80
tct gag gat gag gct gat tat aac tgt gca gca tgg gat gac agc ctg			288
Ser Glu Asp Glu Ala Asp Tyr Asn Cys Ala Ala Trp Asp Asp Ser Leu			
	85	90	95
agt ggt ccg gtg ttc ggc gga ggg acc aag ctg acc gtc cta ggt g			334
Ser Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly			
	100	105	110

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<400> 69															
Gln Ser Val Leu Thr Gln Pro Pro Ser Ala Ser Gly Ala Pro Gly Gln															
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Arg Val Thr Ile Ser Cys Ser Gly Ser Ser Ser Asn Ile Gly Ile Asn															
			20				25					30			
Ala Val Asn Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu															
			35				40					45			
Ile Tyr Gly Asn Asp Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser															
			50				55				60				
Gly Ser Lys Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln															
			65				70				75				80
Ser Glu Asp Glu Ala Asp Tyr Asn Cys Ala Ala Trp Asp Asp Ser Leu															
							85				90				95
Ser Gly Pro Val Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly															
			100								105				110

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Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn															
1				5				10					15		
Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp															
			20				25						30		
Met Thr Asp Ser Asp Cys Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile															
			35				40						45		
Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile															
			50				55						60		

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